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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,050	08/11/2006	Timothy Robert Hawkes	70294US	5616

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EXAMINER

FOX, DAVID T

ART UNIT	PAPER NUMBER
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1638

NOTIFICATION DATE	DELIVERY MODE
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11/23/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

IP.SBI@syngenta.com

Office Action Summary	Application No. 10/564,050	Applicant(s) HAWKES, TIMOTHY ROBERT	
	Examiner David T. Fox	Art Unit 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Applicant's Response

Applicant's amendments and accompanying arguments of 14 August 2009 have overcome all objections and rejections not repeated below.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Objections

Newly amended claims 3-5 are objected to for their misspelling of --- phosphinothricin--- as "phosphoinothricin".

Claim 1 is objected to under 37 CFR 1.121(c) for failing to reproduce all of the deleted material with strikethroughs or brackets. In line 5, the phrase "either the" was deleted before "male". However, the phrase was simply omitted from the amended claim, instead of being reproduced with a strikethrough. In the interest of compact prosecution, the amended claim has been examined.

Obviousness

Claim 1 remains rejected under 35 U.S.C. 103(a) as being unpatentable over **Quandt et al (US 6,384,304)** in view of **McCabe et al (1999**, Theoretical and Applied Genetics 99: 587-592), as stated on pages 5-7 of the last Office action for claims 1-2, 4 and 6.

Claims 1 and 3-6 (newly amended) are rejected under 35 U.S.C. 103(a) as being unpatentable over **Quandt et al (US 6,384,304)** in view of **McCabe (1999)** as applied to claim 1 above, and further in view of **Bartsch et al (US 6,555,733)**, as stated on pages 7-8 of the last Office action for claims 3 and 5.

Claim 7 (newly amended) is rejected under 35 U.S.C. 103(a) as being unpatentable over **Quandt et al (US 6,384,304)** in view of **McCabe (1999)** and further in view of **Bartsch et al (US 6,555,733)** as applied to claims 3-6 above, and further in view of **Williams et al (US 5,977,433)**.

The claim is drawn to the above process wherein an additional coding sequence encoding the inactivating enzyme is employed, said additional coding sequence under the control of another male-specific promoter.

Quandt et al in view of McCabe et al teach the above process, but do not teach the use of an additional male-specific promoter for the inactivating enzyme coding sequence.

Williams et al teach the use of multiple male-specific promoters for expressing coding sequences involved in male sterility, as stated on page 9 of the last Office action, third paragraph.

It would have been obvious to one of ordinary skill in the art to utilize the method of producing conditionally male sterile plants taught by Quandt et al in view of McCabe et al and further in view of Bartsch et al, and to modify that method by incorporating an additional male-specific promoter as taught by Williams et al for increased control of the process, as stated on page 9 of the last Office action, fourth paragraph.

Applicant's arguments filed 14 August 2009 have been fully considered but they are not persuasive. Applicant urges that Quandt et al teach away from the use of herbicide application in column 2, lines 47-63, that McCabe et al do not teach methods of conferring male sterility, and that neither reference teaches the co-expression of the

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inactivating enzyme in floral tissues other than those in which the activating enzyme was expressed. Applicant further urges that neither Bartsch et al nor Williams et al make up for the deficiencies of Quandt et al or McCabe et al.

The Examiner maintains that Quandt et al clearly suggest the use of both the acetyltransferase gene in the non-reproductive portions as well as the deacetylase gene in the reproductive portions, coupled with application of the herbicide (PPT). See, e.g., column 4, lines 18-30; and column 8, lines 3-6. Moreover, the portion of Quandt et al cited by Applicant refers to methods of linking antisense RNA-encoding male sterility genes to herbicide resistance genes, which are not instantly claimed.

Regarding McCabe et al, the Examiner maintains that the reference teaches the advantages of using the plastocyanin promoter for constitutive expression of the same acetyltransferase gene utilized by Quandt et al for constitutive expression. The substitution of known starting materials with equivalent functions would have been obvious to the artisan of ordinary skill, in the absence of evidence to the contrary.

Regarding the co-expression of the inactivating enzyme in other floral tissues, the Examiner notes that this feature is not recited in claims 1 or 3-6. Claim 7 as newly amended incorrectly recites the use of an additional male-specific promoter for expressing the inactivating enzyme in a conditionally male sterile plant, said male sterile plant already comprising an activating enzyme coding sequence under the control of a male-specific promoter. However, page 5 of the instant specification, lines 16-19 and Example 5, the paragraph bridging pages 27 and 28 of the specification, teach that the *additional* coding sequence encoding the *inactivating enzyme* should be expressed

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under the control of a *female*-specific promoter, when conditional *male sterility* is desired.

Conclusion

No claim is allowed.

The following amendments would result in allowable subject matter:

Cancel claim 1, and correct the spelling of ---phosphinothricin--- in all claims.

In claim 3, lines 1-2, delete “according to claim 1”; in line 4, delete “hydrolyzing, or otherwise”, and delete the comma after “from”; and in line 10, delete “either” and “or female” before and after “male”, respectively.

Incorporate claim 7 into claim 3, but recite that ---the PAT enzyme is additionally expressed from a female-specific floral promoter---.

In claim 4, lines 2-3, replace “an amidase or hydrolase” with --- a deacetylase---.

Prior Art of Interest

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, in their teachings that it was well-known in the art that the L-enantiomer of phosphinothricin is the active herbicidal component.

Shutze et al (US 4,922,013), see, e.g., column 1, lines 6-14.

Droge-Laser et al, 1994, Plant Physiology 105: 159-166, see, e.g. page 159, column 1, middle paragraph.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David T. Fox whose telephone number is (571) 272-0795. The examiner can normally be reached on Monday through Friday from 10:30AM to 7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg, can be reached on 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/David T Fox/

Primary Examiner, Art Unit 1638

November 18, 2009